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ABSTRACT

This paper outlines a case study based upon the functional assessment of a pre-school child's aggressive and disruptive behaviors, revealing difficulties with transitions from one activity to another at school. Antecedent conditions and functional communication were addressed in the behavior plan using a schedule board based on the Picture Exchange Communication System (PECS). After implementation of the PECS intervention, disruptive and aggressive behavior decreased dramatically with a concurrent increase in cooperative behavior. Appropriate behavior during transition times was maintained throughout the remainder of the school year. The case study provided illustrates the usefulness of a functional picture communication board and daily schedule for a young child with pervasive developmental disorder. (Contains 20 references and 2 figures.) (GCP)

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Functional Assessment Leading to a Behavior Plan for Transition Times at School

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Abstract

Functional assessment of a pre-school child's aggressive and disruptive behaviors revealed difficulties with transitions from one activity to another at school. Antecedent conditions and functional communication were addressed in the behavior plan using a schedule board based on the Picture Exchange Communication System. A dramatic decrease in aggression and increase in cooperative behavior in the classroom was observed.

Functional Assessment Leading to a Behavior Plan for Transition Times at School

Temple Grandin (1984), a woman with autism who is a veterinarian and author, described the communication problems she experienced as a child. When she was unable to speak her thoughts, the only effective way of expressing herself was to scream. Inappropriate behaviors are often the most efficient way for children with communication difficulties to get their needs met. Functional analysis is recommended to determine the possible communicative intent of challenging behavior problems (Horner, 1994; Iwata, Dorsey, Slifer, Bauman, & Richman, 1982; McCarthy & Dipisa, 1997; Neef & Iwata, 1994; Wacker, 1989).

Long-term successful outcomes for children with disabilities depend on increasing functionally relevant replacement behaviors rather than simply eliminating maladaptive behavior (Donnellan, Mirenda, Mesaros, & Fassbender, 1984; Lohrmann-O'Rourke, Knoster, Llewellyn, 1999). Pragmatically-based interventions, for example, manipulating antecedents (Touchette, MacDonald, & Langer, 1985) or teaching functionally relevant behaviors, i.e. communication (Carr & Durand, 1985), to replace maladaptive ones, are sound educational goals.

Children with autism and pervasive developmental disorder experience serious communication and behavioral difficulties. They manifest atypical learning patterns with comparative strengths in nonverbal, nonsocial problem solving and weaknesses in social-communicative interaction. Behavior problems exhibited by these children are associated with developmental differences in nonsocial and social thinking (see Quill, 1995a).

The Picture Exchange Communication System (PECS) is a popular tool designed to teach functional communication skills to individuals with communication disorders (Bondy & Frost, 1993, 1994 a, b, 1995; Larkin, 1997; Lepkowska, 1998; Shwartz, Garfinkle, & Bauer, 1998; Simon, Whitehair, & Toll, 1996). Photographs, pictographs, and printed materials are presented to the child to clearly explain social-behavioral rules and skills. Appropriate behavior is specified for particular contexts. Children using the PECS are taught to give a picture of a desired item or activity to a partner in exchange for the item. By so doing, the child initiates communication with a concrete outcome in a social context. Quill's work (1995b) emphasized the importance of visually-cued instructions (i.e., pictographic and written language) and organizational aids (i.e., schedule boards) to enhance the understanding of verbal and environmental cues by children with autism and pervasive developmental disorders.

Method

Subject and Setting: A three year old boy with a diagnosis of pervasive developmental disorder was referred for an evaluation early in the school year because of dangerous and disruptive behaviors of hitting, kicking, biting, crying, and screaming. He attended a special education preschool class 5 mornings per week along with four other students, ages 3 to 5 years, with similar special needs. The class was staffed by a teacher and two teaching assistants.

Observation and Recording: A functional assessment was conducted. to determine the purpose served by the child's maladaptive behaviors and to study the environmental factors supporting those problem behaviors. To obtain a baseline, the child was observed

in his half-day special education preschool class for two morning sessions. Data were collected using scatter plot methods recommended by Touchette, MacDonald, and Langer (1985) and O'Neill and colleagues (1997). Twenty-six instances of the problem behaviors were counted--12 instances on the first day and 14 on the second. Antecedent conditions, perceived functions served by the problem behaviors, and the actual consequences following the problem behavior were recorded simultaneously. See Figure 1.

Insert Figure 1 about here

As evidenced by the clustering of data points on the observation form, transition times emerged as an antecedent to the problem behaviors. Following aggressive or disruptive outbursts, the child either was allowed to remain on the original task or was provided with physical guidance to the next activity by the teacher. Both escape from the demands of a new activity and teacher attention appeared to be the maintaining consequences. While engaged in a task, the child worked well and even seemed to enjoy himself. It was hypothesized that switching activities and expectations were unsettling for him. The child's problem behaviors served to communicate his distress during transitions.

Design and Conditions: A PECS based schedule board was provided for the child at school. The schedule board consisted of line drawings representing various settings and daily activities. Pictures were secured with Velcro strips. Upon his arrival at school, the teacher and child reviewed the schedule board

together. The child then removed the first picture and was led to the first activity. He matched his picture with one on a container and engaged in the activity. Upon completion of the task, the picture was deposited in the container and the child received a pretzel as a reward. Transitions in this pre-school class were signaled by turning the lights off and by a verbal cue. Those signals prompted the child to return to the schedule board for his next pictured assignment.

Insert Figure 2 about here

Results

After implementation of the PECS intervention, disruptive and aggressive behavior decreased dramatically within three days with a concurrent increase in cooperative behavior. Appropriate behavior during transition times was maintained by using the PECS program throughout the remainder of the school year. The pretzel reward was withdrawn after one week with no detrimental effects.

Conclusions

Acknowledging the functional validity of this young boy's aggressive and disruptive behaviors conveys a respect for his need to communicate. Firm conclusions about the Picture Exchange Communication System are limited in this case due to weak experimental evidence. However, the food reinforcer was not an active ingredient in the intervention. The dramatic and lasting reduction in the child's aggressive behavior and the increase in cooperation are clinically significant outcomes which support the effectiveness of the PECS. Also, the data demonstrate the utility of functional assessment in developing a positive

behavior plan to help this child cope with transition times at school.

There is a need to bridge the gap between our understanding of the unique learning styles of children with communication disorders and educational/behavioral interventions. Visually-cued instructional supports can assist those children comprehend social cues and develop self-control. This case study illustrates the usefulness of a functional picture communication board and daily schedule for a young child with pervasive developmental disorder. The positive outcome bolster Quill's (1995) contention that schedule boards are a useful tool in allowing a child to keep track of the day's events and concomitantly, develops a child's understanding of time frames and environmental sequences.

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Figure Caption

Figure 1. Functional assessment observation form. Numbers repeated across the categories of antecedents, perceived functions, and actual consequences refer to the same incident.

		BEHAVIORS													ANTECEDENTS													PERCEIVED FUNCTIONS													ACTUAL CONSEQUENCES											
		SCREAM / YELL	CRY	HIT / KICK	BITE						DEMAND / REQUEST	DIFFICULT TASK	TRANSITION	ALONE	ANOTHER STUDENT	LOUD NOISE												ATTENTION	CONTINUE SAME ACTIVITY	SELF-STIMULATION						DEMAND / REQUEST	ACTIVITY	PEERS	OTHER											TEACHER ATTENTION	QUIET AREA									
8:15 - 8:30 INDIVIDUAL		13	1								13	1																																							
WORK TIME 8:30 - 9:00 INTERACTIVE		14	2		15						14	2			15													15																							
ROUTINES 9:00 - 9:15		16	3								10	3																																						
CIRCLE 9:15 - 9:30		4	17	5							17	4	5																																					
SNACK 9:30 - 9:45 QUIET TIME /		18	6								18	6																																						
BATHROOM 9:45 - 10:00 INDIVIDUAL		19	7	8	20						19	7	8		20													8	20																					
WORK / PLAY 10:00 - 10:15		9	21								21	9																																						
RUG TIME 10:15 - 10:45 WORK /		10	22								22	10																																						
PLAYGROUND 10:45 - 11:00 QUIET TIME /		11	23		24						23	11																24																					
BATHROOM 11:00 - 11:15 STORY		12	25		26						25	12			26																																			

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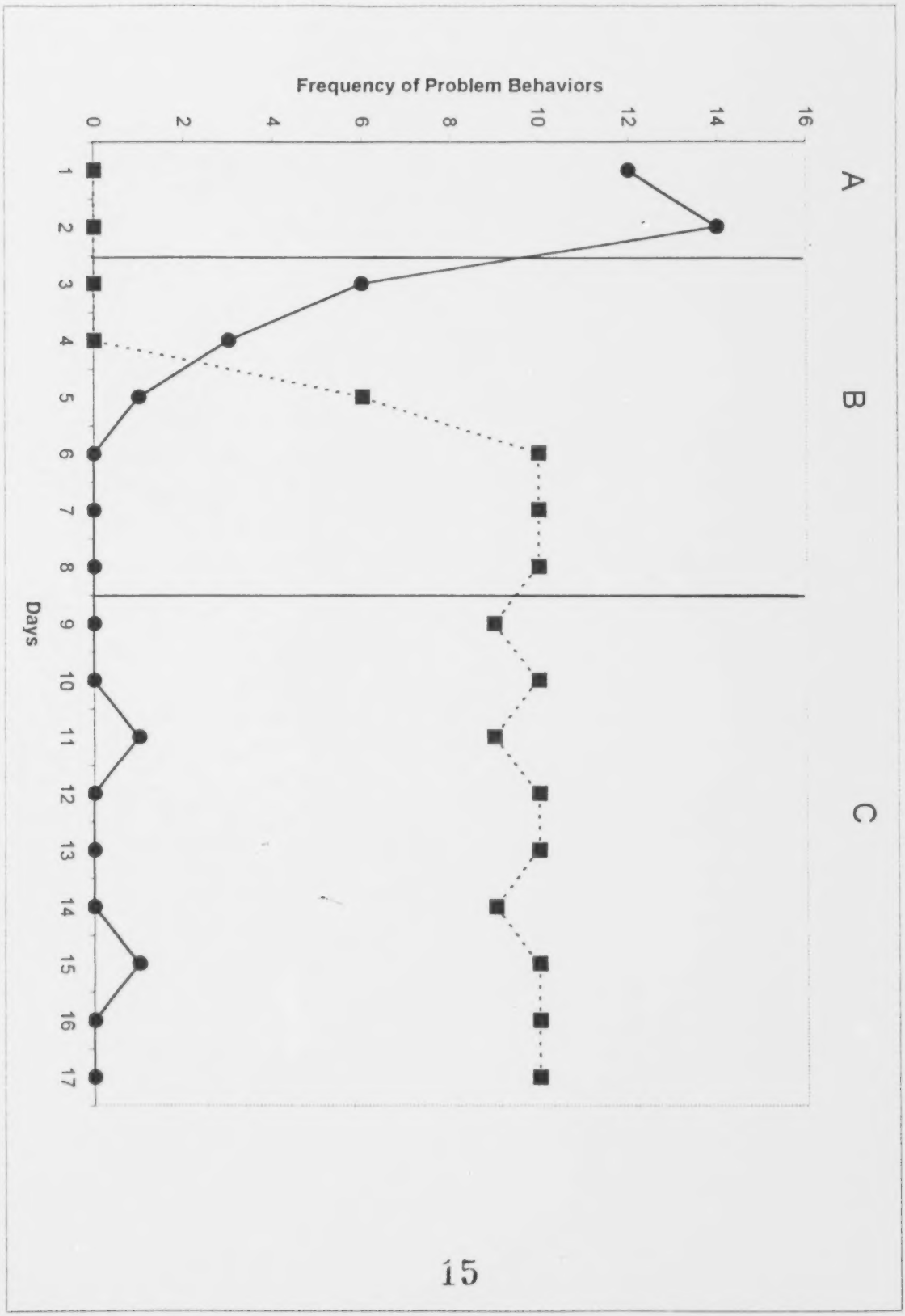
Figure Caption

Figure 2. Frequency of disruptive behaviors indicated by circles and cooperative behaviors indicated by squares during (A) baseline, (B) PECS and pretzel reward intervention, and (C) PECS alone condition.


Frequency of Problem Behaviors
0
2
4
6
8
10
12
14
16
Days
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
A
B
C